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IN THE CLAIMS

1. (Currently amended) An annealed thermal pyrolytic graphite ("TPG") feedstock material comprising

a board of annealed pyrolytic graphite having a thermal conductivity of greater than 1000 watts/m-K, a size in any dimension of at least 5 cm, a thickness of at least 0.2 mm, wherein

said board ~~comprises~~ consists essentially of a plurality of flat graphite sheets layers being parallel to each other; ~~and~~

said board has having a flatness with a deviation angle of less than 0.075 degrees per mm of thickness; and

said annealing is at a temperature of above 2900°C.

2. (Original) The annealed ~~pyrolytic graphite~~ TPG material of claim 1, having length and width dimensions of at least 5 cm respectively.

3. (Original) The annealed ~~pyrolytic graphite~~ TPG material of claim 1, having a thickness of at least 0.5 mm.

4. (Original) The annealed ~~pyrolytic graphite~~ TPG material of claim 1, in the form of a graphitized board of polyimide.

5. (Original) The annealed ~~pyrolytic graphite~~ TPG material of claim 4, wherein said graphitized board of polyimide comprises a plurality of polyimide films having a thickness of less than 50 microns graphitized at a temperature of at least about 2800°C.

6. (Original) The annealed ~~pyrolytic graphite~~ TPG material of claim 1, in the form of a hot pressed board of pyrolytic graphite.

7. (Currently amended) The annealed ~~pyrolytic graphite~~ TPG material of claim 6, wherein said board of pyrolytic graphite is hot-pressed by heating a stack of alternate layers of graphite

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plates and pyrolytic graphite ~~sheets~~ layers at sufficient temperature and pressure for a sufficient period of time to convert said pyrolytic graphite into highly oriented pyrolytic graphite.

8. (Currently amended) The annealed ~~pyrolytic graphite~~ TPG material of claim 7, wherein said board of pyrolytic graphite is hot-pressed by using a plurality of graphite plates as dies.

9. (Cancelled) A method for manufacturing a feedstock annealed pyrolytic graphite material, the process comprising the steps:

heating one or more sheets of pyrolytic graphite having a size in any dimension of at least 5 cm;

heating and pressing said one or more sheets of pyrolytic graphite superimposed onto a surface of one or more plates at a temperature of at least 2900°C,

thereby forming one or more sheets of annealed pyrolytic graphite comprising a plurality of graphite planes being parallel to each other within at least 0.075 degrees per mm of thickness, having a thermal conductivity of greater than 1000 watts/m-K, a size in any dimension of at least 5 cm, and a thickness of at least 0.2 mm.

9. (Cancelled) The method of claim 9, wherein said one or more plates comprise graphite.

10. (Cancelled) The method of claim 9, wherein said one or more plates are dies.

11. (Cancelled) The method of claim 9, wherein one or more sheets of pyrolytic graphite are superimposed onto a surface of one or more plates.

12. (Cancelled) A method for forming thermal pyrolytic graphite tiles for the manufacture of heat management devices, said method comprising:

cleaving a board of annealed pyrolytic graphite into separate layers of pyrolytic graphite, said board having has a thermal conductivity of greater than 1000 watts/m-K, a size in any dimension of at least 5 cm, and a thickness of at least 0.2 mm;

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machining said layers of pyrolytic graphite into tiles of sufficient dimensions for use in heat management devices;

wherein said board of annealed pyrolytic graphite comprises a plurality of graphite planes being parallel to each other to within at least 0.075 degrees per mm of thickness.

13. (Cancelled) An article comprising the thermal pyrolytic graphite tiles manufactured by the method of claim 12.

14. (Cancelled) An article comprising the annealed pyrolytic graphite manufactured by the method of claim 9.

15. (Amended) An article comprising the annealed ~~pyrolytic graphite~~ TPG feedstock material of claim 1.